

Pending Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of reducing the bit rate of a video bitstream to a meet bandwidth constraint, the method comprising:

identifying transform coefficients representing video content in a frame or a portion of frame of the video bitstream; and

filtering selected transform coefficients from the video bitstream to thereby reduce the bit rate of the video bitstream and produce a reduced bit rate for the video bitstream that meets the bandwidth constraint, wherein the video bitstream before filtering does not meet the bandwidth constraint and the video bitstream including the modified transform coefficients includes the reduced bit rate that meets the bandwidth constraint.

2. (Original) The method of claim 1, wherein filtering selected transform coefficients comprises using a cut-off index.
3. (Original) The method of claim 1, wherein filtering selected transform coefficients comprises using a filter.
4. (Original) The method of claim 3, wherein the filter comprises ones and zeros.
5. (Previously Presented) The method of claim 3, wherein the filter comprises threshold values that determine which transform coefficients are filtered.
6. (Previously Presented) The method of claim 1 wherein the method selectively filters fewer transform coefficients for a macroblock according to the number of the macroblock in a frame.
7. (Previously Presented) The method of claim 1 wherein the transform coefficients from the video bitstream are filtered differentially on a per block or a per macroblock basis.

Appl. No.: 09/867,966

2

8. (Previously Presented) A method of filtering transform coefficients associated with an input bitstream, method comprising:
- identifying transform coefficients associated with an input bitstream;
 - selecting transform coefficients for filtering to provide modified transform coefficients, wherein the transform coefficients associated with the input bitstream are selected differentially on a per block or a per macroblock basis; and
 - generating an output bitstream, wherein the output bitstream associated with modified transform coefficients uses less bandwidth than the input bitstream associated with the transform coefficients.
9. (Original) The method of claim 8, wherein identifying transform coefficients comprises performing variable length decoding on the input bitstream.
10. (Original) The method of claim 8, wherein identifying transform coefficients comprises acquiring the transform coefficients from a file.
11. (Original) The method of claim 8, wherein identifying transform coefficients comprises performing a DCT operation on video data.
12. (Original) The method of claim 8, wherein identifying transform coefficients comprises performing a DCT operation on audio data.
13. (Original) The method of claim 8, wherein the transform coefficients are DCT coefficients.
14. (Original) The method of claim 8, wherein generating an output bitstream comprises performing variable length coding.
15. (Original) The method of claim 8, wherein selecting transform coefficients for filtering comprises identifying a cut-off index.

16. (Original) The method of claim 8, wherein selecting transform coefficients for filtering comprises identifying a filter.
17. (Previously Presented) The method of claim 16, wherein the filter changes on a per block or per macroblock basis.
18. (Previously Presented) The method of claim 16, wherein the filter comprises threshold values that determine which transform coefficients are filtered.
19. (Original) The method of claim 16, wherein the filter is 8x8.
20. (Original) The method of claim 16, wherein the filter is a one dimensional array.
21. (Previously Presented) The method of claim 8 wherein the method selectively filters fewer transform coefficients in a macroblock according to the number of the macroblock in a frame.
22. (Previously Presented) An apparatus for filtering transform coefficients associated with input bits to provide modified transform coefficients associated with output bits, the apparatus comprising:
 - an input interface for receiving transform coefficients associated with input bits;
 - a filtering stage coupled to the input interface, wherein the filtering stage selects transform coefficients for filtering; and
 - an output interface coupled with the filtering stage for providing modified transform coefficients associated with output bits, wherein the number of output bits is less than the number of input bits and the filtering produces a bit rate for the modified transform coefficients that meets a bandwidth constraint, wherein the transform coefficients before filtering does not meet the bandwidth constraint and the modified transform coefficients includes a reduced bit rate that meets the bandwidth constraint
23. (Original) The apparatus of claim 22, wherein the input interface comprises a variable length decoder.

24. (Original) The apparatus of claim 22, wherein the input interface reads the transform coefficients from a file.
25. (Original) The apparatus of claim 22, wherein the output interfaces comprises a variable length encoder.
26. (Original) The apparatus of claim 22, wherein the filtering stage uses a cut-off index.
27. (Original) The apparatus of claim 22, wherein the filtering stage uses a filter.
28. (Previously Presented) The apparatus of claim 27, wherein the filter changes on a per block or per macroblock basis.
29. (Previously Presented) The apparatus of claim 27, wherein the filter comprises threshold values that determine which transform coefficients are filtered.
30. (Previously Presented) The apparatus of claim 22 wherein the method selectively filters fewer transform coefficients for a macroblock according to the number of the macroblock in a frame.
31. (Previously Presented) A computer readable medium comprising computer code for filtering transform coefficients associated with an input bitstream, the computer readable medium comprising:
- computer code for identifying transform coefficients associated with an input bitstream;
 - computer code for selecting transform coefficients for filtering to provide modified transform coefficients, wherein the transform coefficients associated with the input bitstream are selected differentially on a per block or a per macroblock basis; and
 - computer code for generating an output bitstream, wherein the output bitstream associated with modified transform coefficients uses less bandwidth than the input bitstream associated with the transform coefficients.

32. (Original) The computer readable medium of claim 31, wherein identifying transform coefficients comprises performing variable length decoding on the input bitstream.
33. (Original) The computer readable medium of claim 31, wherein identifying transform coefficients comprises acquiring the transform coefficients from a file.
34. (Original) The computer readable medium of claim 31, wherein identifying transform coefficients comprises performing a DCT operation on video data.
35. (Original) The computer readable medium of claim 31, wherein identifying transform coefficients comprises performing a DCT operation on audio data.
36. (Original) The computer readable medium of claim 31, wherein the transform coefficients are DCT coefficients.
37. (Original) The computer readable medium of claim 31, wherein generating an output bitstream comprises performing variable length coding.
38. (Original) The computer readable medium of claim 31, wherein selecting transform coefficients for filtering comprises identifying a cut-off index.
39. (Original) The computer readable medium of claim 31, wherein selecting transform coefficients for filtering comprises identifying a filter.
40. (Previously Presented) An apparatus for reducing the bit rate of a video bitstream to meet bandwidth constraints, the method comprising:

means for identifying transform coefficients representing video content in a frame or a portion of frame of the video bitstream; and

means for filtering selected transform coefficients from the video bitstream to thereby reduce the bit rate of the video bitstream and produce a reduced bit rate for the video bitstream that meets the bandwidth constraint, wherein the video bitstream before filtering does not meet the bandwidth constraint and the video bitstream including the modified transform coefficients includes the reduced bit rate that meets the bandwidth constraint.

41. (Original) The apparatus of claim 40, wherein filtering selected transform coefficients comprises using a cut-off index.
42. (Original) The apparatus of claim 40, wherein filtering selected transform coefficients comprises using a filter.
43. (Original) The apparatus of claim 42, wherein the filter comprises ones and zeros.
44. (Previously Presented) The apparatus of claim 42, wherein the filter comprises threshold values that determine which transform coefficients are filtered.
45. (Previously Presented) The apparatus of claim 40 wherein the method selectively filters fewer transform coefficients for a macroblock according to the number of the macroblock in a frame.
46. (Previously Presented) The apparatus of claim 40 wherein the transform coefficients from the video bitstream are filtered differentially on a per block or a per macroblock basis.
47. (New) The method of claim 1 further comprising providing rate control information for a block of video data.
48. (New) The method of claim 47 wherein the rate control information includes a number of input and output bytes for prior filtered blocks of data.
49. (New) The apparatus of claim 22 further comprising a rate controller that provides rate control information for a block of video data.
50. (New) The method of claim 49 wherein the rate controller provides information about a number of input and output bytes for prior filtered blocks of data to provide the rate control information for the block.